

Name: \_\_\_\_\_

### at1110paper\_practice\_test (v6)

1. Factor the expression.

$$x^2 - x - 72$$

$$(x + 8)(x - 9)$$

2. Solve the equation.

$$(7x + 3)(8x - 5) = 0$$

$$x = \frac{-3}{7} \quad x = \frac{5}{8}$$

3. Expand the following expression into standard form.

$$(7x + 8)(2x + 3)$$

$$14x^2 + 21x + 16x + 24$$

$$14x^2 + 37x + 24$$

4. Expand the following expression into standard form.

$$(7x + 3)(7x - 3)$$

$$49x^2 - 21x + 21x - 9$$

$$49x^2 - 9$$

5. Expand the following expression into standard form.

$$(9x + 7)^2$$

$$\begin{aligned}81x^2 + 63x + 63x + 49 \\81x^2 + 126x + 49\end{aligned}$$

6. Solve the equation with factoring by grouping.

$$15x^2 + 18x + 20x + 24 = 0$$

$$\begin{aligned}(3x + 4)(5x + 6) = 0 \\x = \frac{-4}{3} \quad x = \frac{-6}{5}\end{aligned}$$

7. Factor the expression.

$$49x^2 - 16$$

$$(7x - 4)(7x + 4)$$

8. Solve the equation.

$$10x^2 - 9x - 11 = 3x^2 + 2x - 5$$

$$\begin{aligned}7x^2 - 11x - 6 = 0 \\(7x + 3)(x - 2) = 0 \\x = \frac{-3}{7} \quad x = 2\end{aligned}$$